

Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1– 12. (Previously cancelled)

13. (Currently amended) A method for preparing a porous composite of polymer sponge and ceramic body with excellent thermal insulation property, the method comprising:

an impregnation step in which ~~[[a]]the~~ polymer sponge having a three-dimensional porous network structure with open cells is immersed in an inorganic adhesive solution, such that the polymer sponge is ~~completely~~ impregnated with the inorganic adhesive solution;

a dewatering step in which the inorganic adhesive solution is partially removed from the polymer sponge impregnated with the inorganic adhesive solution so as to create pores in ~~a portion of~~ the open cells ~~[[in]]of~~ the three-dimensional porous network structure at an amount selected according to a desired density of the ceramic body, such that wherein the pores the three-dimensional porous network structure of the polymer sponge is are coated with the inorganic adhesive solution ~~at an amount selected according to the desired density of the porous ceramic body~~; and

a drying step in which ~~the polymer sponge from which the inorganic adhesive had been partially removed in the dewatering step~~ the coated inorganic adhesive solution is dried and cured to form the ceramic body coated in the pores so as to cure the inorganic adhesive,

wherein the porous composite includes the polymer sponge and the ceramic body coated in the pores of the polymer sponge the pores in the open cells in the three-dimensional porous network structure are provided without a sintering process.

14. (Previously presented) The method of Claim 13, wherein the impregnating, dewatering and drying steps are performed repeatedly several times.

15. (Currently Amended) The method of Claim 13, wherein the inorganic adhesive solution is formed of at least one selected from the group consisting of silicates and modified silicates[[,]] including sodium silicate, potassium silicate and lithium silicate, sol compounds[[,]] including silica sol and alumina sol, and phosphate adhesives[[,]] including aluminum phosphate and modified aluminum phosphate.

16. (Currently Amended) The method of Claim 13, wherein, ~~at the impregnation step, the polymer sponge is immersed in~~ the inorganic adhesive solution comprises ~~after mixing the inorganic adhesive with~~ a surfactant.

17. (Currently Amended) The method of Claim 13, wherein, ~~at the impregnation step, the polymer sponge is immersed in the inorganic adhesive after mixing~~ the inorganic adhesive solution comprises ~~with~~ at least one selected from the group consisting of silane coupling agents and organic adhesives.

18. (Currently Amended) The method of Claim 13, wherein, ~~at the impregnation step, the polymer sponge is immersed in~~ the inorganic adhesive solution ~~after mixing the inorganic adhesive with~~ comprises at least one selected from the group consisting of sodium silicofluoride and magnesium sulfate.

19. (Currently Amended) The method of Claim 13, wherein, ~~at the impregnation step, the polymer sponge is immersed in~~ the inorganic adhesive solution ~~after mixing the inorganic adhesive with~~ comprises a water repellent.

20. (Currently Amended) The method of Claim 13, wherein, ~~at the impregnation step, the polymer sponge is immersed in the inorganic adhesive after mixing~~ the inorganic adhesive solution comprises ~~with~~ at least one selected from the group consisting of aluminum hydroxide, magnesium hydroxide, antimony compounds, boric acid, borax, phosphoric acid, phosphate, phosphorus-based and halogenbased flame retardants, and thermosetting resins.

21. (Currently Amended) The method of Claim 13, ~~which additionally comprises~~ further comprising the step of introducing a gaseous or solid curing agent into the pores of the polymer sponge, before the drying step but after the dewatering step.

22. (Previously presented) The method of Claim 21, wherein the impregnating, dewatering and drying steps are performed repeatedly several times.

23. (Currently Amended) The method of Claim 21, wherein the inorganic adhesive solution is formed of at least one selected from the group consisting of silicates and modified silicates[,,] including sodium silicate, potassium silicate and lithium silicate, sol compounds[,,] including silica sol and alumina sol, and phosphate adhesives[,,] including aluminum phosphate and modified aluminum phosphate.

24. (Currently Amended) The method of Claim 21, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution ~~comprises after mixing the inorganic adhesive with~~ a surfactant.

25. (Currently Amended) The method of Claim 21, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution ~~after mixing the inorganic adhesive with~~ comprises at least one selected from the group consisting of silane coupling agents and organic adhesives.

26. (Currently Amended) The method of Claim 21, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution ~~after mixing the inorganic adhesive with~~ comprises at least one selected from the group consisting of sodium silicofluoride and magnesium sulfate.

27. (Currently Amended) The method of Claim 21, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution ~~after mixing the inorganic adhesive with~~ comprises a water repellent.

28. (Currently Amended) The method of Claim 21, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution ~~after mixing the inorganic adhesive with-~~ comprises at least one selected from the group consisting of aluminum hydroxide, magnesium hydroxide, antimony compounds, boric acid, borax, phosphoric acid, phosphate, phosphorus-based and halogenbased flame retardants, and thermosetting resins.

29. (Cancelled)

30. (Currently Amended) The method of Claim 13, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution ~~after mixing the inorganic adhesive with-~~ comprises a solid or liquid curing agent.

31. (Previously presented) The method of Claim 30, wherein the impregnating, dewatering and drying steps are performed repeatedly several times.

32. (Currently Amended) The method of Claim 30, wherein the inorganic adhesive solution is formed of at least one selected from the group consisting of silicates and modified silicates[,] including sodium silicate, potassium silicate and lithium silicate, sol compounds[,] including silica sol and alumina sol, and phosphate adhesives[,] including aluminum phosphate and modified aluminum phosphate.

33. (Currently Amended) The method of Claim 30, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution ~~after mixing the inorganic adhesive with-~~ comprises a surfactant.

34. (Currently Amended) The method of Claim 30, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution ~~after mixing the inorganic adhesive with-~~ comprises at least one selected from the group consisting of silane coupling agents and organic adhesives.

35. (Currently Amended) The method of Claim 30, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution comprises after mixing the inorganic adhesive with at least one selected from the group consisting of sodium silicofluoride and magnesium sulfate.

36. (Currently Amended) The method of Claim 30, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution after mixing the inorganic adhesive with comprises a water repellent.

37. (Currently Amended) The method of Claim 30, wherein, ~~at the impregnation step, the polymer sponge is immersed in the~~ inorganic adhesive solution after mixing the inorganic adhesive with comprises at least one selected from the group consisting of aluminum hydroxide, magnesium hydroxide, antimony compounds, boric acid, borax, phosphoric acid, phosphate, phosphorus-based and halogenbased flame retardants, and thermosetting resins.

38. (Cancelled)

39. (Currently amended) A porous composite of polymer sponge and ceramic body, comprising a porous polymer sponge having a plurality of pores and a ceramic body coated in the pores of the porous polymer sponge, wherein the ceramic body is formed of at least one selected from the group consisting of silicates including sodium silicate, potassium silicate and lithium silicate, silica and alumina with excellent thermal insulation property, which is prepared by a method according to Claim 13 for preparing a porous ceramic body with excellent thermal insulation property, the method comprising:

an impregnation step in which a polymer sponge having a three-dimensional porous network structure with open cells is immersed in an inorganic adhesive, such that the polymer sponge is completely impregnated with the inorganic adhesive;

a dewatering step in which the inorganic adhesive is partially removed from the polymer sponge impregnated with the inorganic adhesive so as to create pores in a portion of the open cells in the three-dimensional porous network structure, such that the three-dimensional porous network structure of the polymer sponge is coated with the inorganic

~~adhesive at an amount selected according to the desired density of the porous ceramic body;
and~~

~~a drying step in which the polymer sponge from which the inorganic adhesive had been
partially removed in the dewatering step is dried so as to cure the inorganic adhesive;~~

~~wherein the pores in the open cells in the three-dimensional porous network structure are
provided without a sintering process.~~

40. (Currently Amended) The porous composite of polymer sponge and ceramic body of Claim 39, wherein the method additionally comprises the step of introducing a gaseous or solid curing agent into the pores of the polymer sponge, before the drying step but after the dewatering step.

41. (Cancelled)